IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): An optical scanner which irradiates a light beam to a scanned surface of an image support to form an electrostatic latent image on the image support surface, comprising:

a light source emitting a light beam;

at least one final-stage reflection mirror having a reflection surface which reflects a reflected light beam from a polygon mirror directly to the scanned surface of the image support, a first axis parallel to a main-scanning correspondence direction on the reflection surface, and a second axis along the reflection surface and perpendicular to the first axis;

an optical element adjusting a position of a scanning line in a sub-scanning correspondence direction, the optical element having a beam-incidence surface, a third axis parallel to the main-scanning correspondence direction on the beam-incidence surface, and a fourth axis perpendicular to the third axis and along a beam-incidence direction;

a first adjustment unit provided to rotate said at least one final-stage reflection mirror around the second axis in order to attain uniformity of a scanning speed of the optical scanner in the main scanning direction;

a second adjustment unit provided to rotate said optical element around the fourth axis in order to correct an inclination of the scanning line in the sub-scanning correspondence direction to a desired position of the scanning line, at least one of the first adjustment unit and the second adjustment unit being provided with an electrically driven actuator;

a detection unit detecting an error of the scanning speed of the optical scanner; and

a control unit controlling driving of the actuator based on the scanning speed error detected by the detection unit,

wherein said at least one final-stage reflection mirror is a half mirror, and the detection unit detects the error of the scanning speed based on a difference of detection times of the light beam detected by a plurality of ~~at least three~~ photodetectors, said plurality of ~~at least three~~ photodetectors being arranged on a back surface of the half mirror apart from one another at a given interval.

Claim 2 (Currently Amended): An optical scanner which irradiates a light beam to a scanned surface of an image support to form an electrostatic latent image on the image support surface, comprising:

a light source emitting a light beam;

at least one final-stage reflection mirror having a reflection surface which reflects a reflected light beam from a polygon mirror directly to the scanned surface of the image support;

an optical element adjusting a position of a scanning line in a sub-scanning correspondence direction, the optical element having a beam-incidence surface, a first axis parallel to the main-scanning correspondence direction on the beam-incidence surface, and a second axis perpendicular to the first axis and along a beam-incidence direction;

a first supporting unit supporting a portion of said at least one final-stage reflection mirror;

a first adjustment unit provided to rotate said at least one final-stage reflection mirror about the first supporting unit in a direction perpendicular to the reflection surface and change a distance between the reflection surface and the image support surface in order to attain uniformity of a scanning speed of the optical scanner in the main scanning direction;

a second supporting unit supporting a portion of said optical element;

a second adjustment unit provided to rotate said optical element about the second supporting unit in the sub-scanning correspondence direction ~~a direction of the second axis~~ in order to correct an inclination of the scanning line in the sub-scanning correspondence direction to a desired position of the scanning line, at least one of the first adjustment unit and the second adjustment unit being provided with an electrically driven actuator;

a detection unit detecting an error of the scanning speed of the optical scanner; and

a control unit controlling driving of the actuator based on the scanning speed error detected by the detection unit,

wherein said at least one final-stage reflection mirror is a half mirror, and the detection unit detects the error of the scanning speed based on a difference of detection times of the light beam detected by a plurality of ~~at least three~~ photodetectors, said plurality of ~~at least three~~ photodetectors being arranged on a back surface of the half mirror apart from one another at a given interval.

Claim 3 (Currently Amended): The optical scanner of claim 2 wherein the first supporting unit is provided at a first end of said at least one final-stage reflection mirror in the main-scanning correspondence direction outside a scanning range of said at least one final-stage reflection mirror, and the first adjustment unit is provided at a second end of said at least one final-stage reflection mirror in the main-scanning correspondence direction outside the scanning range of said at least one final-stage reflection mirror.

Claim 4 (Original): The optical scanner of claim 2 wherein the second supporting unit is provided at a first end of the optical element in the main-scanning correspondence direction, and the second adjustment unit is provided at a second end of the optical element in the main-scanning correspondence direction.

Claim 5 (Canceled).

Claim 6 (Currently Amended): The optical scanner of claim 1 wherein the first adjustment unit comprises a feed screw provided to move said at least one final-stage reflection mirror against an elastic actuation force of an elastic member that compresses said at least one final-stage reflection mirror toward the first adjustment unit.

Claim 7 (Original): The optical scanner of claim 1 wherein the second adjustment unit comprises a feed screw provided to move the optical element against an elastic actuation force of an elastic member that compresses the optical element toward the second adjustment unit.

Claim 8 (Original): The optical scanner of claim 7 wherein the feed screw of the second adjustment unit is rotated by an electrically driven actuator.

Claims 9 and 10 (Canceled).

Claim 11 (Original): The optical scanner of claim 1 wherein a plurality of image supports are provided, and the first adjustment unit and the second adjustment unit are provided respectively for each of the plurality of image supports in an optical path where optical writing of each image support is carried out by the optical scanner.

Claim 12 (Original): The optical scanner of claim 1 wherein a plurality of image supports are provided, one of the plurality of image supports includes a reference optical path, and the first adjustment unit and the second adjustment unit are provided respectively

for each of the remaining image supports other than said one of the plurality of image supports in an optical path where optical writing is carried out by the optical scanner.

Claim 13 (Currently Amended): An optical-path adjustment method for an optical scanner which irradiates a light beam to a scanned surface of an image support to form an electrostatic latent image on the image support surface, the optical scanner including:

a light source emitting a light beam;

at least one final-stage reflection mirror having a reflection surface which reflects a reflected light beam from a polygon mirror directly to the scanned surface of the image support, a first axis parallel to a main-scanning correspondence direction on the reflection surface, and a second axis along the reflection surface and perpendicular to the first axis; and

an optical element adjusting a position of a scanning line in a sub-scanning correspondence direction, the optical element having a beam-incidence surface, a third axis parallel to the main-scanning correspondence direction on the beam-incidence surface, and a fourth axis perpendicular to the third axis and along a beam-incidence direction, the method comprising the steps of:

rotating said at least one final-stage reflection mirror around the second axis in order to attain uniformity of a scanning speed of the optical scanner in the main scanning direction; and

rotating said optical element around the fourth axis in order to correct an inclination of the scanning line in the sub-scanning correspondence direction to a desired position of the scanning line,

wherein the second rotating step is performed after the first rotating step is performed, and

said at least one final-stage reflection mirror is a half mirror, and in the first rotating step an error of the scanning speed is detected based on a difference of detection times of the light beam detected by a plurality of ~~three~~ photodetectors.

Claim 14 (Currently Amended): An optical-path adjustment method for an optical scanner which irradiates a light beam to a scanned surface of an image support to form an electrostatic latent image on the image support surface, the optical scanner including:

a light source emitting a light beam;

at least one final-stage reflection mirror having a reflection surface which reflects a reflected light beam from a polygon mirror directly to the scanned surface of the image support;

an optical element adjusting a position of a scanning line in a sub-scanning correspondence direction, the optical element having a beam-incidence surface, a first axis parallel to the main-scanning correspondence direction on the beam-incidence surface, and a second axis perpendicular to the first axis and along a beam-incidence direction;

a first supporting unit supporting a portion of said at least one final-stage reflection mirror; and

a second supporting unit supporting a portion of said optical element, the method comprising the steps of:

rotating said at least one final-stage reflection mirror about the first supporting unit in a direction perpendicular to the reflection surface and changing a distance between the reflection surface and the image support surface in order to attain uniformity of a scanning speed of the optical scanner in the main scanning direction; and

rotating said optical element about the second supporting unit in the sub-scanning correspondence direction ~~a direction of the second axis~~ in order to correct an inclination of

the scanning line in the sub-scanning correspondence direction to a desired position of the scanning line,

wherein the second rotating step is performed after the first rotating step is performed, and

said at least one final-stage reflection mirror is a half mirror, and in the first rotating step an error of the scanning speed is detected based on a difference of detection times of the light beam detected by a plurality of ~~three~~ photodetectors.

Claim 15 (Currently Amended): The method of claim 13 wherein in the first rotating step a distance between the reflection surface of said at least one final-stage reflection mirror and the image support surface is changed by rotating a feed screw manually, and in the second rotating step an inclination of the optical element in a direction perpendicular to the main-scanning correspondence direction is changed by an electrically driven actuator.

Claim 16 (Canceled).

Claim 17 (Currently Amended): The method of claim 13 wherein in the first rotating step the difference of detection times of the light beam detected by the plurality of ~~three~~ photodetectors is measured by turning on the light source, the plurality of ~~three~~ photodetectors being arranged on a back surface of the half mirror apart from one another at a given interval.

Claim 18 (Currently Amended): The method of claim 13 wherein the optical scanner comprises a CCD camera configured to record image data at a time based on output signals of the plurality of ~~three~~ photodetectors.

Claim 19 (Currently Amended): The method of claim 17 wherein the distances of the plurality of photodetectors are stored in a memory device and the distances are read from the memory device when detecting the error of the scanning speed.

Claim 20 (Currently Amended): An image forming apparatus comprising:

an optical scanner which irradiates a light beam to a scanned surface of an image support to form an electrostatic latent image on the image support surface; and

an image formation unit forming an image on a recording material based on the electrostatic latent image formed on the image support surface,

the optical scanner comprising:

a light source emitting a light beam;

at least one final-stage reflection mirror having a reflection surface which reflects a reflected light beam from a polygon mirror directly to the scanned surface of the image support, a first axis parallel to a main-scanning correspondence direction on the reflection surface, and a second axis along the reflection surface and perpendicular to the first axis;

an optical element adjusting a position of a scanning line in a sub-scanning correspondence direction, the optical element having a beam-incidence surface, a third axis parallel to the main-scanning correspondence direction on the beam-incidence surface, and a fourth axis perpendicular to the third axis and along a beam-incidence direction;

a first adjustment unit provided to rotate said at least one final-stage reflection mirror around the second axis in order to attain uniformity of a scanning speed of the optical scanner in the main scanning direction; and

a second adjustment unit provided to rotate said optical element around the fourth axis in order to correct an inclination of the scanning line in the sub-scanning correspondence direction to a desired position of the scanning line, at least one of the first adjustment unit and the second adjustment unit being provided with an electrically driven actuator;

a detection unit detecting an error of the scanning speed of the optical scanner; and

a control unit controlling driving of the actuator based on the scanning speed error detected by the detection unit,

wherein said at least one final-stage reflection mirror is a half mirror, and the detection unit detects the error of the scanning speed based on a difference of detection times of the light beam detected by a plurality of ~~at least three~~ photodetectors, said plurality of ~~at least three~~ photodetectors being arranged on a back surface of the half mirror apart from one another at a given interval.

Claim 21 (Currently Amended): An optical scanner which irradiates a light beam to a scanned surface of an image support to form an electrostatic latent image on the image support surface, the optical scanner comprising:

a light source emitting a light beam;

at least one final-stage reflection mirror having a reflection surface which reflects a reflected light beam from a polygon mirror directly to the scanned surface of the image support, a first axis parallel to a main-scanning correspondence direction on the reflection surface, and a second axis along the reflection surface and perpendicular to the first axis;

an optical element adjusting a position of a scanning line in a sub-scanning correspondence direction, the optical element having a beam-incidence surface, a third axis

parallel to the main-scanning correspondence direction on the beam-incidence surface, and a fourth axis perpendicular to the third axis and along a beam-incidence direction;

first adjustment means for rotating said at least one final-stage reflection mirror around the second axis in order to attain uniformity of a scanning speed of the optical scanner in the main scanning direction; and

second adjustment means for rotating said optical element around the fourth axis in order to correct an inclination of the scanning line in the sub-scanning correspondence direction to a desired position of the scanning line, at least one of the first adjustment means and the second adjustment means being provided with an electrically driven actuator;

detection means for detecting an error of the scanning speed of the optical scanner; and

control means for controlling driving of the actuator based on the scanning speed error detected by the detection means,

wherein said at least one final-stage reflection mirror is a half mirror, and the detection means detects the error of the scanning speed based on a difference of detection times of the light beam detected by a plurality of ~~at least three~~ photodetectors, said plurality of ~~at least three~~ photodetectors being arranged on a back surface of the half mirror apart from one another at a given interval.

Claim 22 (Currently Amended): An optical scanner which irradiates a light beam to a scanned surface of an image support to form an electrostatic latent image on the image support surface, the optical scanner comprising:

a light source emitting a light beam;

at least one final-stage reflection mirror having a reflection surface which reflects a reflected light beam from a polygon mirror directly to the scanned surface of the image support;

an optical element adjusting a position of a scanning line in a sub-scanning correspondence direction, the optical element having a beam-incidence surface, a first axis parallel to the main-scanning correspondence direction on the beam-incidence surface, and a second axis perpendicular to the first axis and along a beam-incidence direction;

first supporting means for supporting a portion of said at least one final-stage reflection mirror;

first adjustment means for rotating said at least one final-stage reflection mirror about the first supporting unit in a direction perpendicular to the reflection surface and changing a distance between the reflection surface and the image support surface in order to attain uniformity of a scanning speed of the optical scanner in the main scanning direction;

second supporting means for supporting a portion of said optical element; and

second adjustment means for rotating said optical element about the second supporting unit in the sub-scanning correspondence direction ~~a direction of the second axis~~ in order to correct an inclination of the scanning line in the sub-scanning correspondence direction to a desired position of the scanning line, at least one of the first adjustment means and the second adjustment means being provided with an electrically driven actuator;

detection means for detecting an error of the scanning speed of the optical scanner; and

control means for controlling driving of the actuator based on the scanning speed error detected by the detection means,

wherein said at least one final-stage reflection mirror is a half mirror, and the detection means detects the error of the scanning speed based on a difference of detection

times of the light beam detected by a plurality of ~~at least three~~ photodetectors, said plurality of ~~at least three~~ photodetectors being arranged on a back surface of the half mirror apart from one another at a given interval.

Claim 23 (Currently Amended): An image forming apparatus comprising:

an optical scanner which irradiates a light beam to a scanned surface of an image support to form an electrostatic latent image on the image support surface; and

an image formation unit forming an image on a recording material based on the electrostatic latent image formed on the image support surface,

the optical scanner comprising:

a light source emitting a light beam;

at least one final-stage reflection mirror having a reflection surface which reflects a reflected light beam from a polygon mirror directly to the scanned surface of the image support, a first axis parallel to a main-scanning correspondence direction on the reflection surface, and a second axis along the reflection surface and perpendicular to the first axis;

an optical element adjusting a position of a scanning line in a sub-scanning correspondence direction, the optical element having a beam-incidence surface, a third axis parallel to the main-scanning correspondence direction on the beam-incidence surface, and a fourth axis perpendicular to the third axis and along a beam-incidence direction;

first adjustment means for rotating said at least one final-stage reflection mirror around the second axis in order to attain uniformity of a scanning speed of the optical scanner in the main scanning direction; and

second adjustment means for rotating said optical element around the fourth axis in order to correct an inclination of the scanning line in the sub-scanning correspondence direction to a desired position of the scanning line, at least one of the first adjustment means and the second adjustment means being provided with an electrically driven actuator;

detection means for detecting an error of the scanning speed of the optical scanner; and

control means for controlling driving of the actuator based on the scanning speed error detected by the detection means,

wherein said at least one final-stage reflection mirror is a half mirror, and the detection means detects the error of the scanning speed based on a difference of detection times of the light beam detected by a plurality of ~~at least three~~ photodetectors, said plurality of ~~at least three~~ photodetectors being arranged on a back surface of the half mirror apart from one another at a given interval.